HORNETS TECH

Broadcast, made simple.

RF, wireless, IP and remote production equipment for broadcast, film and media.

Wireless Video / IP Mesh / Encoding & IPTV / Antennas & Amplifiers / Consultancy

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ABOUT HORNETS TECH

Real engineers, on the end of the phone

Hornets Tech has been supplying RF and wireless video services to broadcast, film and media since 2006.

Every system we quote is put together by people who have spent 25 years on location, in OB trucks, on race circuits and on film units, building the same links or IP systems our customers need to work on the day.

We supply the full chain: camera-back transmitters and encoders, diversity receivers and decoders, IP Mesh, camera control, RF over fibre, antennas and amplifiers, and IPTV distribution. Where nothing off the shelf fits, we design a system that does, then support it in service.

2006
Company formed

25 yrs
Onsite broadcast and film experience

2026
Launched our own brand encoding and IPTV system

Worldwide
Supply, export documentation and support

CONTENTS

ENCODERS, DECODERS & IPTV

Designed and built in house

This range we make. The encoders, decoders and IPTV stack are our own design, and our own code, which is why we can do things with them that a large supplier cannot.

Buy it however suits. As finished hardware, racked and ready. As software on its own, running on hardware you already own and already trust. Or white labelled, carrying your name rather than ours.

Owning the code enables us to react fast to feature requests, rather than bundling them onto a roadmap. Development is continuous, and customers on support get the improvements as they land.

- In-house design and build
- Hardware or software only
- White label
- Features on request
- Continuous development

SDI Encoder

Sixteen SDI inputs into IP, in one rack unit. Mixed SD, HD and 3G on the same chassis, sixteen channels of embedded audio carried through with language tags, and a live thumbnail per channel so you can see what is on each input without a monitor wall.

Up to 16 SDI in | SD / HD / 3G-SDI | H.264 / HEVC | 16-ch audio

ST 2110 Encoder

For a plant that has already moved to uncompressed IP. Sixteen ST 2110 streams in over four 25 GbE ports with 2022-7 protection, out as MPEG-TS. Hardware PTP, so the timing comes off the network rather than being guessed at.

4 × 25 GbE | ST 2022-7 | 16 ch HD | Hardware PTP

HDMI Encoder

Eight HDMI sources into IP, for the side of the building where the source is a media player or a set-top box rather than a camera. Over a hundred EDID presets, selectable per input, because HDMI sources negotiate rather than comply.

8 HD or 2 × 4K30 | 100+ EDID | HDR10 / HLG

SDI Decoder

IP back to baseband, on sixteen 3G-SDI outputs. The bridge to the SDI infrastructure that is already installed and is not going anywhere. Built-in SMPTE test patterns, so a path can be proven before there is anything to play down it.

16 × 3G-SDI out | SRT | Test patterns

ST 2110 Decoder

The reverse path for an uncompressed plant: compressed in, ST 2110-20 and -30 back onto the fabric over four 25 GbE, with 2022-7 dual path. For playout, monitoring and disaster recovery.

4 × 25 GbE | ST 2022-7 | 4:2:2 10-bit out

ENCODERS, DECODERS & IPTV / CODECS AND IPTV DISTRIBUTION

IPTV Server

The headend the encoders feed. Takes MPEG-TS in, holds the channel line-up, and puts it out four ways: multicast for the building, HTTP-TS and HLS for phones and tablets, and WebRTC for a browser that needs the picture now rather than ten seconds from now.

100+ channels Multicast / HLS / WebRTC STB auto-provision

IPTV Set-Top Box

Two independent HDMI outputs at up to 4K, each full screen or a 2x2 quad split, so one fanless box drives eight streams across two screens. It boots straight into the streams on power-up, which is what makes it usable on a wall that nobody logs into.

2 × HDMI · Up to 4K · 8 streams · Kiosk boot

1xx2 Portable Codec

One SDI in and one SDI out at the same time, fanless and small enough to travel. Send the programme out and take the return feed back on the same unit. It dials home over WireGuard, so it works from behind someone else's NAT without asking for a port.

1 in + 1 out · SRT / RIST · WireGuard · HEVC 4:2:2 10-bit

Compact SDI Codec

Four SDI connectors in a small desktop chassis, each one independently an input or an output. Four in, four out, or the job split whichever way the site needs. For the room that needs a few channels and has nowhere to put a rack.

4 SDI in · Any mix in/out · Desktop · Web UI + REST API

ABR HLS Transcoder

One MPEG-TS in, an adaptive-bitrate HLS ladder out, with the decode, the scaling and every rung of the encode done on the card rather than on the host CPU. Keyframes line up across the rungs, so a player changes rung without a stutter.

H.264 / AV1 · 26 ch per card · Hardware ladder

Which unit do I need?

UNIT	IN	OUT	WHERE IT FITS
SDI Encoder	16 × SDI	MPEG-TS over IP	Plant is SDI, distribution is IP
ST 2110 Encoder	16 × ST 2110	MPEG-TS over IP	Plant has moved to uncompressed IP
HDMI Encoder	8 × HDMI	MPEG-TS over IP	Sources are players and set-top boxes
SDI Decoder	MPEG-TS over IP	16 × 3G-SDI	Feeding SDI kit that is already installed
ST 2110 Decoder	MPEG-TS over IP	ST 2110-20 / -30	Playout and monitoring on an IP fabric
1xx2 Portable Codec	1 × SDI and IP	IP and 1 × SDI	Field contribution with a return feed
Compact SDI Codec	Up to 4 × SDI	Up to 4 × SDI, any mix	Small site, a few channels, no rack
IPTV Server	MPEG-TS over IP	Multicast, HLS, WebRTC	The headend everything else feeds
Set-Top Box	IP streams	2 × HDMI	The screen at the end
ABR HLS Transcoder	MPEG-TS	HLS ladder	Getting one feed onto every device

This table answers which unit. The pages that follow answer what it does.

RF & WIRELESS

From a single antenna to a forty camera system

We are a reseller for Domo Broadcast Systems, Aber Electronics and Rogue Waves.

Behind us sit the manufacturers themselves. Their engineering is on the end of the phone, so every job gets our experience and theirs, whether that is a single camera in a studio or a motorsport weekend with cameras on forty cars.

Twenty-five years on location means we know. A single antenna gets the same attention as a thirty camera build.

Whether you are a seasoned RF company or looking at this for the first time, we are always happy to talk it through and build the perfect solution.

Domo Broadcast | Aber Electronics | Rogue Waves

System design | One point of contact | 25 years on location

DOMO BROADCAST SYSTEMS

ABER ELECTRONICS

DOMO BROADCAST SYSTEMS / QUARTZ & IP MESH

The DBS Quartz System

Quartz brings HEVC video, COFDM and IP Mesh together, so the picture, the camera control, the talkback and the return vision all travel on one deployment. Add Mesh nodes and repeaters as the venue demands and the network grows with it.

HEVC video | COFDM | IP Mesh | Camera control | Talkback and tally | Return vision

Quartz TX Camera Back

HEVC encoder, COFDM modulator and a two-node Mesh radio in one camera back, on V-lock or AB-mount.

2.0–2.7 GHz | 4K option

Quartz Hub

Base-end Mesh interface: Ethernet, TSL tally and talkback, with audio, IP and return vision options.

TSL tally | Talkback

Cyanview Control

IP camera control over the Quartz Mesh. RCP panel, RIO serial interface and NIO with 16 GPIO.

Dual camera RCP

Nano IP Mesh Node

A private multi-node IP network. Every node is a router and a repeater, so coverage grows by adding units.

2 × 100 mW

IP Repeater

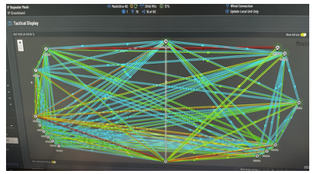
2 x 1 W repeater node with PoE and optional battery plates, to extend a Mesh across a venue.

2 × 1 W | PoE

Nano SDR PRO TX

Miniature H.264 transmitter with an integrated Mesh-capable SDR, plus optional camera control.

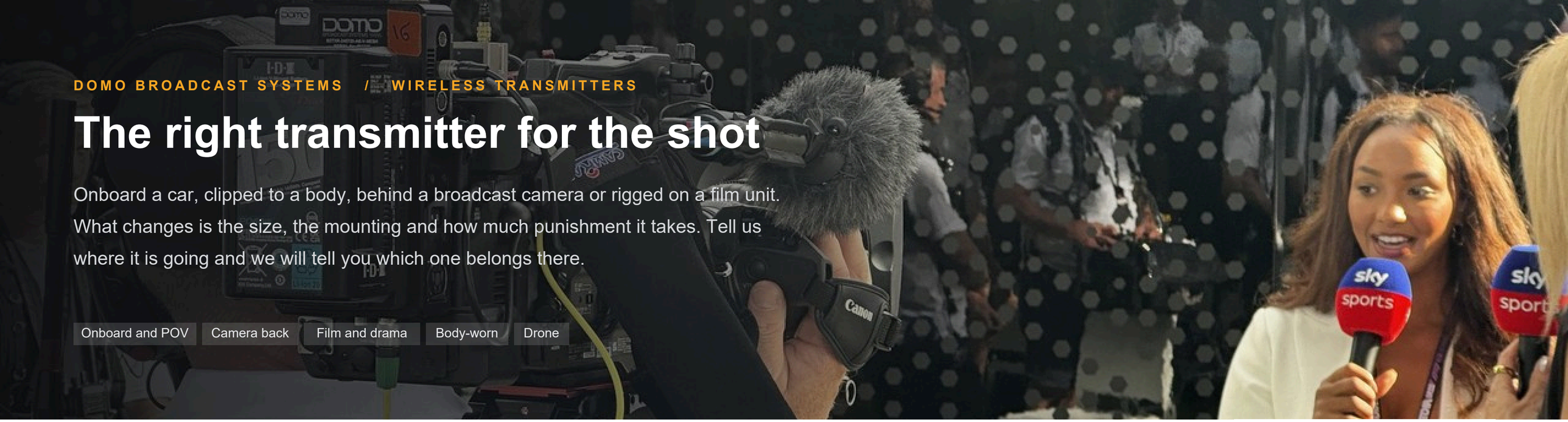
1.14–6.0 GHz



Mission Commander

Management and visualisation for the Mesh: node status, links and video, with video wall options.

Video wall



DOMO BROADCAST SYSTEMS / WIRELESS TRANSMITTERS

The right transmitter for the shot

Onboard a car, clipped to a body, behind a broadcast camera or rigged on a film unit. What changes is the size, the mounting and how much punishment it takes. Tell us where it is going and we will tell you which one belongs there.

Onboard and POV | Camera back | Film and drama | Body-worn | Drone

Sapphire BTX

The standard camera back. A true HEVC encoder and COFDM modulator behind the camera, in six frequency variants from 1 GHz to 6 GHz, with camera control versions and phantom power for a 1 W booster.

1.0–6.0 GHz | V-lock or AB

Sapphire B2TX

Dual frequency, carrying a low band and a high band at once, so one unit covers the congested urban site and the clean high-band link without a swap between jobs.

1.0–1.5 + 6.4–7.0

2.0–2.9 + 7.0–7.5 GHz

NanoHEVC TX

Ultra-light HEVC at 85 x 80 x 26 mm, for rigs where weight decides the specification. A clamshell converts it to a V-lock or AB-mount camera back when the job changes.

85 x 80 x 26 mm | 2.0–7.5 GHz

Pico TXR

Ultra-miniature 50 mW HEVC transmitter for body-worn rigs and miniature drones. Used at the Olympics for the POV drone shots, which is about as hard a test of size and reliability as it gets.

50 mW | 2.0–6.0 GHz

SDI or HDMI

Raptor Eye

A Pico built with the camera in a single package, so there is no separate head, cable or bracket to rig. Currently 2 GHz only. Production units ship in 2 GHz and 5 GHz.

2 GHz now

2 and 5 GHz to follow

Sapphire RPM

The motorsport onboard. HEVC encoder and COFDM transmitter with QuadSYNC as standard, and a proven track record in the harshest environments a camera gets fitted to.

1980–2700 MHz | 3000–3700 MHz

Every way of getting the picture back

Making sure you choose the right tool for the job is not always straightforward. That is why we offer a range of options to make sure you have the right kit for the task. Domo's range of receivers, IP encoder and decoders are battle proven, based on years of broadcast experience.

Diversity receive | H.264 and HEVC | Portable | IP contribution | ASI | ST 2110

Sapphire RXD5

The workhorse. 1U diversity demodulator and decoder, class-leading COFDM RF with ultra-low-latency H.264 and HEVC, expanded by licence rather than new hardware.

2 to 16-way | 4K licence | ST 2110 25G | 2110 2022-7

Sapphire DEC5

Third-width mini HEVC decoder with ASI input, for the many positions that need one clean decode rather than a full receive chain. Three mount in a 1U shelf.

1/3 width | ASI in

Portable Receiver

Lightweight two-input COFDM receiver and decoder on a V-lock or AB battery, for applications where mobility is the point. Quad split or a single UHD picture.

1.14–6.0 GHz | Quad split

Onyx

Ultra-low-delay HEVC over IP in 1U, with 4K and QuadSYNC included, SRT, Dolby pass-through and dual AC or DC power. Full rack or half rack available.

4K included | ST 2022-7 | SRT

DOMO BROADCAST SYSTEMS / RF INFRASTRUCTURE

Everything between the antenna and the rack

A wireless link is only as good as the parts nobody photographs. Downconverters, filtering, splitters, fibre, boosters, cables and connectors, specified for the site rather than pulled off a shelf.

Downconversion · Filtering · Splitting · RF over fibre · Boosters · Cables and adaptors

Rogue Waves DC PRO

The 1980 to 2700 MHz Pro unit, with switchable LO, selectable gain and front panel filter selection.

1980–2700 MHz · 9–30 V DC

RF over Fibre

Remote and base units carrying RF from the antenna back to the rack over tactical or SMPTE fibre, removing coax loss.

TAC or SMPTE 311 · Dual or quad antenna

Broadcast Downconverter

Compact tri-gain unit with switchable LO, so standard coax runs back to the receiver. Filters and splitters to suit.

1.0–7.5 GHz · Switchable LO

1 W Barrel Booster

In-line booster sitting directly on the transmitter output, supplied with a D-Tap to Lemo power cable.

2000–7500 MHz · D-Tap powered

ABER ELECTRONICS / ANTENNAS

The right antenna for the job

Gain, pattern and mounting matter. Tell us the site, the distance and what the antenna has to survive, and we will tell you which is the best for you.

433 MHz to 10 GHz | Omni, sector and patch | Onboard and body-worn | Bespoke designs to order

Sector Antennas

Directional 13 dBi at 110 degrees nominal, the standard choice for a covered receive site.

1–10 GHz

360° Central Receive

Five internal antennas giving 13 dBi horizontal and 2 dBi upward, for air-to-ground receive.

2.0–2.8 GHz

Colinear Omnis

3, 5 and 8 dBi in rigid tube or flexible, for transmit and receive across the range.

1 GHz–10 GHz

Camera Flexible Omnis

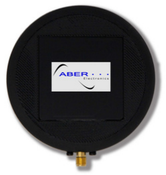
Sprung and flexible whip versions for anywhere that takes a knock, and for transmit on the move.

1.0–7.5 GHz

Patch & Bodyworn

4 dBi patches, body-worn versions and two-patch sets with splitter, plus 6 dBi fabric antennas.

1.2–6.0 GHz



Motorsport Onboard

Omni and patch designs with underside or side entry, and a magnetic option for quick fitting.

2.0–2.5 / 7.0–7.4 GHz

Antenna range at a glance

FAMILY	PATTERN / GAIN	FREQUENCY COVERAGE	TYPICAL USE
Sector	Directional 13 dBi, 110°	1.0 to 10.0 GHz	Covered receive sites, venue and circuit corners
360° central receive	13 dBi horizontal, 2 dBi up	2.0 to 2.8 GHz	Air to ground, ground receive stations
180° directional	Directional 6 dBi, 180°	1.0 to 3.5 GHz	Wide single-sided coverage
Colinear omni, rigid	Omni 3 dBi and 5 dBi	1.0 to 10.0 GHz	General transmit and receive
Colinear omni, high gain	Omni 8 dBi	1.0 to 1.5 GHz	Extended range omni transmit
Sprung and flexible omni	Omni 3 dBi and 8 dBi	1.0 to 7.5 GHz	Vehicle, onboard and hard-wear positions
Flexible whip omni	Omni 3 dBi	433 MHz to 10.0 GHz	Body-worn, portable transmit
Circular polarised omni	Omni 6 dBi, RHC	1.2 to 1.6 GHz	Drone and airborne links
Patch	Directional 4 dBi	1.2 to 2.7 GHz	Fixed directional, discreet mounting
Bodyworn patch and sets	Directional 4 dBi	1.2 to 6.0 GHz	Covert and body-worn, front and back coverage
Ballistic nylon fabric	Omni 6 dBi	700 MHz to 5.5 GHz	Flexible worn antennas, dual-band variant
Hemi omni dome	Hemispherical omni	430 MHz to 6.0 GHz	Vehicle roof, Heli / Drone applications, rugged and lightweight versions
Motorsport omni and patch	Omni	2.0 to 2.5 and 7.0 to 7.4 GHz	Onboard, underside and side entry

2GHz Sector

7Ghz Sector

Colinear omnis

7Ghz Omni

Patch and body-worn

Hemi Omni

This is not the full list. Other variants, frequencies and connector options are available, so talk to us about the position you need to cover. Connector options include N male, N female, TNC, SMA and covered SMA. Bespoke and specialist designs available to order.

ABER ELECTRONICS / AMPLIFIERS

Apollo 1 W and Kronos 2 W In-Line

Black in-line block amplifiers, N male in and N female out, powered from the transmitter at 11 to 16 V with output protection. They fit straight in the antenna line with no separate power run.

1500–2000 2000–2500 3100–3500 5500–6000 6500–7500 MHz Output protection

100 mW OEM Modules

Mini COFDM power amplifier modules for OEM integration, with U.FL or SMA connections.

1500–6000 MHz

1 W Amplifiers

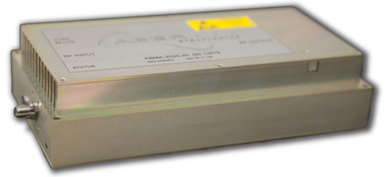
Silver box with SMA and Lemo power, plus a TDD and Mesh variant for use on a Mesh node.

1000–7500 MHz TDD / Mesh

Kronos 2 W Amplifiers

Boxed 2 W with filtercon and motorsport options, plus high gain and automatic gain control versions.

1000–2500 MHz AGC 20–40 dB



3 W, 5 W and 10 W

Finned, fan-cooled units at 12 to 36 V with N type, for central transmit and air-to-ground links.

300–8500 MHz Fan cooled

RF ACCESSORIES

Amplifier and filter selector

OUTPUT	FREQUENCY	FORMAT
100 mW	1500–2000 MHz	OEM U.FL / boxed SMA
100 mW	2000–2900 MHz	OEM U.FL / boxed SMA
100 mW	3200–3600 MHz	OEM U.FL
100 mW	5500–6000 MHz	OEM U.FL / boxed SMA
1 W	1000–1500 MHz	Silver box / TDD Mesh
1 W	1500–2000 MHz	Silver box / TDD Mesh / Apollo
1 W	2000–2500 MHz	Silver box / TDD Mesh / Apollo
1 W	3100–3500 MHz	Apollo in-line
1 W	5500–6000 MHz	Silver box / Apollo
1 W	6500–7000 MHz	Silver box / Apollo
1 W	7000–7500 MHz	Silver box / Apollo

OUTPUT	FREQUENCY	FORMAT
2 W	1000–1500 MHz	Boxed / high gain / AGC
2 W	1500–2000 MHz	Kronos in-line
2 W	2000–2500 MHz	Boxed / high gain / AGC / Kronos
2 W	3100–3500 MHz	Kronos in-line
2 W	5500–7500 MHz	In-line block
2 W CW	400–900 MHz	Gold flanged box
3 W	3200–3600 MHz	Finned, fan cooled
5 W	2000–2500 MHz	Finned, fan cooled
5 W	3000–3700 MHz	Finned, fan cooled
5 W	4400–5000 MHz	Finned, fan cooled
5 W	5600–5900 MHz	Finned, fan cooled
5 W	7000–8500 MHz	Finned, fan cooled
5 W TDD	300–500 MHz	Finned, Mesh capable
10 W	2000–2500 MHz	Finned, fan cooled
10 W	3100–3500 MHz	Finned, fan cooled
10 W	6500–7500 MHz	Finned, fan cooled

FILTERS

FILTER	COVERAGE	FORMAT
Bandpass, nine cavity	2.0–2.1 GHz	Full size cavity
Bandpass, nine cavity	2.2–2.3 GHz	Full size cavity
Bandpass, nine cavity	2.2–2.4 GHz	Full size cavity
Tuneable channel	2.0–2.6 GHz	10 or 40 MHz
Compact bandpass	2.0–2.1 / 2.2–2.4 GHz	SMA, for Domo MESH

Other frequency options available on request across every family. Power conditioners, DC cables and connector variants including Lemo, Deutsch and filtercon are available throughout. Filter bodies are colour coded by band.

CONSULTANCY & SUPPORT

System design and consultancy

25 YEARS ON LOCATION

The part that is not in a box

Tell us what the job has to do and we will tell you what it needs, including the parts we do not sell. Frequency planning, system drawings, rig and commissioning, and support on the day.

Our equipment and our engineers have worked on some of the largest productions in the world, which is the best evidence we can offer that the kit does what we say it does.

RF planning and survey

Frequency planning, site survey and receive point design.

System design and integration

Full drawings covering RF, UHF, ASI, data, IP content and control, fibre and video, so everyone on site knows what connects to what.

Onsite support

Engineers who have done the job, available for rig, commissioning and event support anywhere in the world.

Used and logistics

Used equipment alongside new sales, shipped worldwide with export documentation handled.

SELECTED FILM CREDITS

F1 THE MOVIE

NO TIME TO DIE

MISSION IMPOSSIBLE

THE FLASH

HORNETS TECH

Let's talk about your project.

Equipment sales, hire, used equipment, system design and onsite support.

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